BRUHAT BANGALORE MAHANAGARA PALIKE
RAJARAJESHWARINAGAR ZONE
ELECTRICAL DIVISION
DETAILED ESTIMATE FOR PUBLIC WORKS

Name of the Work: Providing LED street light fittings with connected accessories in ward no- 16, 17, 37 & releasing of existing sodium vapour lights from ward no- 16, 17, 37 & refixing at ward no 73 and 129 under RR Nagar Zone

Sl No	SR ref		Description of Work	Rs 32500000/-			
	page	item no.		Unit	Qty	Rate	Amount
			PART-A, PWD ELECTRICAL SR-2019-20				
1a	66	12.8.3	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains. Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with W System Power consumption. LED Efficiency> 130lm/w, nominal CRI >75 Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source. LED Streetlight 70watts	No	315	5480.00	1726200.00
1b	67	12.8.4	LED Streetlight 90 Watts	No	1155	7160.00	8269800.00
1c	67	12.8.5	LED Streetlight 120 Watts	No	630	9200.00	5796000.00
2	67	12.9.5	Supply of LED floodlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains. Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application Compliance to IS 10322/ IEC 60598 LM 79 & LM 80 Adherence with RoHS UL approved MCPCB Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools LED Light fixture with W System Power consumption LED Efficiency>130lm/w, nominal CRI >75 Luminaire manufacturer should have in- house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001 2008 Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source. LED Floodlight 180W	Each	163	17600.00	2868800.00

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ರದ್ದುಗೊಳಿಸಿರುವ ಐಟಂಗಳ ಸಂಖ್ಯೆ:.....

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Sl No	SR ref		Description of Work	Unit	Qty	Rate	Amount
	page	item no.					
3	79	14.5	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires	Each	163	175.00	28525.00
4	79	14.2.2	Supplying and Fixing .....mm dia class A GI pipe bracket up to 2.7 meters long terminated with a reducing collar of 40x25mm to which extra pipe of 175mm length is fixed for fixing MV/SV/MH/FTL street light fitting of all capacities on rail/RCC/wall/tubular pole, using suitable clamps, bolts, nuts and wiring using suitable capacity wires. Using 32mm dia G.I.Pipe	Each	2400	1052.00	2524800.00
5	13	4.1.1	Fabricating, supplying and erecting swaged tubular pole of height ...Mtr having three sections, and providing two coats of red oxide paint and finished with two coats of enamelled paint of approved quality and colour and M.S base plate of suitable size welded at the bottom of the pole(as per IS) and 40mm dia GI / flexible PVC pipe of 1 mtr length fitted to the heavy gauge polycarbonate control box including 5way connector of size 167x 125x82mm for 7.5M pole/200x160x98mm for remaining length of pole with front opening cover, with locking arrangements and suitable capacity MCB / DP switch, The pole shall be erected in cement concrete work (1:2:4) including excavation and refilling of planting depth of the pole to the ground level and the coping CC shall be up to 0.6M above ground level as per IS 2713 - 7. Erection of heavy duty pole on Footpath / median 4.1.1) 9Mt (5Mt Hb,165.1mm dia 4.85mm thick x2M Hm, 139.7mmdia 4.50mm thick x 2M Ht,114.3mm dia 3.65mm thick) as per IS 410 SP 32	Each	80	13200.00	1056000.00
6a	79	14.4.1	Supplying and fixing telescopic M.S. bracket fabricated by using 0.5m length 4" dia telescopic M. S. pipe, with 2" dia 1.5m long M. S. bracket and are welded with suitable angle, using 6mm thick M. S. sheet, grip bolts & nuts, as required, suitable for 9 to 12 Mtrs. M. S. tubular pole, with necessary two coats of painting, with all other accessories. Single bracket 1.5 Mtr. Length	Each	60	1200.00	72000.00
6b	79	14.4.3	Double bracket 2x1.5 Mtr length	Each	20	1962.00	39240.00
7	7	2.7.1	Wiring for lighting/power circuit using one of PVC insulated 1100V grade, stranded Aluminium wire single core in open or concealed system of wiring 4sq mm	Mtr.	800	9.00	7200.00
8a	40	6.4.5	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975, 5) 3.5 core 25 sqmm	Mtr	840	180.00	151200.00
8b	40	6.4.4	4 core 16 sqmm	Mtr	200	150.00	30000.00
9a	41	6.5.2	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required. On wall /Structure 6.5.2) 25 sqmm to 75 sqmm	Mtr	840	15.50	13020.00
9b	41	6.5.1	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required. In existing trench/duct. 6 sqmm to 16 sqmm	Mtr	200	11.88	2376.00
10	41	6.6.2	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc. complete.(As per Civil SR KSRB I-2, P-7) In soil (hard)	Mtr	200	102.00	20400.00
11	32	5.49.2	Supplying and fixing of solar lux level street light control switch single phase including suitable capacity contactor. 5KW	Each	105	8800.00	924000.00
12	27	5.17.3	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898.9)50-63Amps SP (Pg no-27 item no-5.17.3)	Each	210	723.00	151830.00

Sl No	SR ref		Description of Work	Unit	Qty	Rate	Amount
	page	item no.					
13	31	5.44.2	Supply and Installation / Fixing / Provision of Outdoor type Thermoplastic Modular Panel enclosure with transparent Polycarbonate Lid, shock proof, IP65 (Weather Proof), rust proof, dust proof, water proof, corrosion proof having internally Embedded gasket on both lid and flap suitable to fix Single Phase / Three Phase Energy Meter in suitable base plate and having a provision for Fuse / MCB cutout with suitable transparent hinged flap opening for operating MCB along with complete tamper proof SEALING facility. 300mmx450mmx214mm	Each	105	5127.00	538335.00
14	26	5.14.1	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts, necessary phase separators, handle and wiring complete. Protection of Overload and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS-13947. (Icu = Ics). Three pole 100amps 25kva	Each	105	4530.00	475650.00
15	30	5.41.1	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. 40x40x6mm	Mtr	105	255.00	26775.00
16	30 60	5.40.1	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminium strips covered with heat shrinkable coloured PVC sleeve, mounted on phenolic/FRP/ DMC insulator which are mounted on powder coated 40x6mm M.S.flat frame work in existing panel board. The bus bar shall have suitable holes for termination of incoming and outgoing cables as per IS specification with necessary bolts, nuts and washers etc., complete. 100Amps, 4x30x6mm Aluminium Strips	Mtr	31.5	2050.00	64575.00
17	10	3.9	Supplying and fixing hylum plastic sheet 3mm thick with necessary nitches for fixing switches, regulators etc., and fixing on existing wood or metal box using N.F. screws.	Sq cm	1417500	0.24	340200.00
18	43	6.17.7	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes 25 sqmm Long Barrel	Each	840	20.00	16800.00
19	6	2.3.7	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments 7) 16 sqmm	Mtr	525	188.00	98700.00
20	75	13.41	Supplying & Fixing of 250W/400W High Pressure Sodium Vapour tubular Lamp with Xenon filled gas with luminous efficiency of greater than 140 lumen/watt or initial lumens of greater than 55000 lumens & avg rated life greater than 26000 hrs. & minimum starting temperature of (-) 40 deg C & Hot restrike time <60 Sec with CCT 2000K . Operating voltage range from 180V to 265V, 50Hz AC power Supply	No	200	1811.00	362200.00
			Sub Total- Part A				**25604626.00**
			Part B, PWD ELECTRICAL SR-2014-15, BESCOM, PWD CIVIL SR-2018-19				
21	56	7.6.4	Supplying and stringing of 1.1KV grade Aerial Bunched Cable Stranded & Compacted Aluminum Phase Conductor, and Stranded Messenger Conductor with all aluminum Alloy, Phase Conductor is insulated with XLPE Compound, insulated Messenger with specified IS-14255 1995 & confirming to GTP of GROUP-A. 2x25+ 1 X 25 SQ.MM	Per Mtr	5000	143.00	715000.00
22	83	8	Supplying and fixing pole clamp for LT AB Cable Bescom SR 18 19	Set	165	314.00	51810.00
23	83	7	Suspension Clamp Assembly 16 to 70 mm (Excluding pole clamp & Eye Hook) Bescom SR 2018-19 (material cost + labour charges)	Set	165	323.00	53295.00

Sl No	SR ref		Description of Work	Unit	Qty	Rate	Amount
	page	item no.					
24	83	10	Dead End Clamp/Anchor Clamp Assembly 25 to 95 Sqmm (excluding pole clamps and Eye hook) Bescom SR 2018-19 (material cost + labour charges)	Set	30	304.00	9120.00
25	83	11	Universal Hook, Bolts & nuts including fixing charges Bescom SR 2018-19 (material cost + labour charges)	No	165	441.00	72765.00
26	83	6	Piercing connector suitable for 16 Sqmm - 95 Sqmm AB Cable - Street Light Connections including fixing charges Bescom SR 2018-19 (material cost + labour charges)	No	330	224.00	73920.00
27	33	5.1.1	Supply and erection of 8 Mtr PCC Pole including earth work etc,. complete as per the standard technical specification of BESCOM 8mtrs	Each	20	3857.00	77140.00
28	33	5.2.1	Supply and erection of .....Mtr RCC Pole including earth work etc,. complete as per the standard technical specification of BESCOM 8Mtr 145Kg WL	Each	20	6047.00	120940.00
29	33	5.4.2	Supply and fixing of .....cross arm including all Hardware's complete as per the standard technical specification of BESCOM 2 Pin 45x45x5mm -510mm	Each	40	306.00	12240.00
30a	33	5.8.5	Supplying and Fixing ..... including all Hardware's etc. complete as per the standard technical specification of BESCOM -RCC clamp	Each	20	84.00	1680.00
30b	33	5.8.6	PCC Clamp	Each	20	84.00	1680.00
32	AR		Releasing and refixing 6x30w/ Sodium Vapour/ metal halide/ LED street light/ Flood light fittings over the existing pole/ wall ceiling including clamps, nuts and wiring using suitable capacity wires	Each	2027	375.00	760125.00
			Sub Total- Part B				1949715.00
			Sub Total- (Part A+B)				27554341.00
			ADD GST 12 % (Part-A)				3072555.12
			Tender premium (5%) & PMC charges(1%)				1837613.77
			Miscellaneous Charges/ Bescom Charges				35490.11
			TOTAL				32500000.00
Rupees Three Crore Twenty Five Lakh Only							

Technically Sanctioned for Rs. 3,25,00,000/- (Three Crore Twenty Five Lakh Only) Amount Cal Under ..... Sub Total- Part B ..... Sub Total- (Part A+B) ..... Job Code No. Allotted as per Comm. Order Vide No. SE(E)/CC-13/2021-22, Dt. 06-07-2021 ..... Tender premium (5%) & PMC charges(1%) ..... Miscellaneous Charges/ Bescom Charges ..... TOTAL ..... Rupees Three Crore Twenty Five Lakh Only ..... AE/JE.. 28/01/22

Certificate:-

1. Certified that this place was inspected by me, this work is essential and prepared this estimate in most economical way of executing the work.

2. The provision made in the estimate are adequate and necessary and the work comes in the BBMP limit and is legitimate Charges on the BBMP funds.

3. This Estimate rates are based on the KPWD Electrical SR-2014-15,2019-20, BESCOM SR and Approved rates by SE(Ele).

Asst. Engineer(Electrical)

Asst.Exe. Engineer(Ele) I/C
RR Nagar Zone

Executive Engineer(Elect)
RR Nagar Zone

Administrative Sanctioned for Rs 3,25,00,000/-
Rs. Three Crore Twenty Five Lakh only is accorded under the head P.1.8.2.8 .....
By EE (Elect) RRN, Page No-2 & 3
Registered as EE (Elect)RRN/No. 01/22-23 Subject to conditions contained in enclosed memo No. 01/2022-23 Date. 12/04/22

AE, (Elect) RRN

EE, (Elect) RRN